

**State of Connecticut – Department of Environmental Protection
Bureau of Materials Management & Compliance Assurance/Water Enforcement and Permitting Division
Bureau of Natural Resources/Inland and Marine Fisheries Divisions
Standard Operating Procedure**

Title: NPDES Permits: Information Requirements relevant to federal Water Pollution Control Act Section 316(b)

Effective Date: February 16, 2010

Applicability: This Standard Operating Procedure (SOP) applies to the Bureau of Materials Management and Compliance Assurance/Water Permitting and Enforcement Division (WPED) and coordination efforts with the Bureau of Natural Resources/Inland and Marine Fisheries Divisions. This Procedure applies to the all WPED Permitting staff and the following BNR staff or Managers or their designee – Mark Johnson and Dave Simpson.

Purpose: The Procedure lists the information that the fisheries biologist would like to be provided upon permit application for both new and existing once-through cooling water intake structures subject to Section 316 (b) of the federal Water Pollution Control Act. The procedure also specifies points of contacts with the Inland and Marine Fisheries Divisions.

Guidelines and Procedures:

1. Information needed for review of fisheries impacts/316(b):

1.1 Description of Facility

- Fuel type, power output
- Purpose of facility (e.g., base-load, peaking)
- Type of cooling system (e.g., once-through, cooling towers)
- Maximum cooling water capacity (mgd)
- Annual capacity factor for last permit period
- Annual cooling water usage (mgd), by month, for prior permit cycle
- Cooling water usage as a percent of water body flow
- Identification and quantification of other water withdrawals from the same source that are used for other purposes (e.g. make-up water for cooling towers) at the facility

1.2 Source Water Body

- Name of water body and location of plant on water body
- Hydrography in the vicinity of the plant (e.g. volume of flow and currents in vicinity of intake)
- Summary of available physical data (e.g. salinity, temperature)

1.3 Description of Cooling Water Intake Structure and Operation

- Location in water body
- Detailed drawings of all intake structure features, including scale and dimensions.
- Pump details (e.g., number of pumps, capacities, and operating schedule)

- Screening devices (behavioral and physical): type of screen, mesh size, debris/fish handling features
 - Detailed description of frequency, speed and duration of screen rotation and spray washing practices, including description of whether screen rotations are performed manually, based on an automated schedule, or based on a pressure sensor
 - Average and maximum approach and thru-screen water velocities (fps). Representative calculations should be shown. Maximum velocities would occur under maximum pumping rates at minimal surface water levels, which would equate to Extreme Low Water (ELW) in tidally affected areas.
 - Fish by-pass and handling facilities
- 1.4 Biocides (if used at the cooling water intake)
- Description and toxicity of biocide used
 - Location of introduction in system
 - Timing and duration of use
- 1.5 Description of structural and operational features that reduce impingement mortality and entrainment.
- 1.6 Description of previous fisheries studies conducted by the facility.
- 1.7 Inclusion of a Literature Cited section with full citations for all literature used in the preparation of the application.
2. Point of Contact with the Inland Fisheries Division staff in the review of new and existing once-through cooling facilities.
- 2.1 It is requested that Mark Johnson be the contact for all facilities located in Connecticut waters. The single exception to this would be the Dominion Nuclear facility located at Millstone Point in Waterford, CT. The Marine Fisheries Division through Dave Simpson will remain the lead review entity for fisheries resource assessment at that facility.
- 2.2 The Inland and Marine Fisheries Divisions may modify the above list in coordination with the WPED/Permitting Program if it is determined that doing so would be helpful to the review process.

APPROVALS:

**Bureau of Materials Management and Compliance Assurance
Water Enforcement and Permitting Division/Program Manager**

Oswald Inglese, Jr., Director /S/Oswald Inglese, Jr. Date: February 16, 2010

**Bureau Natural Resources
Marine and Inland Fisheries Divisions, Program Manager**

Bill Hyatt, Bureau Chief /S/ Bill Hyatt Date: February 16, 2009